



Dati tecnici ed immagini sono indicativi. Mickros si riserva di apportare aggiornamenti in qualsiasi momento e senza obbligo di preavviso.

Technical data and drawings are for information purposes only. Mickros reserves the right to update specs at anytime and without notice.

ATR

DIN 69895

Tubetti per l'adduzione del refrigerante
Coolant tubes
Tubes d'arrosage
Kühlmittelrohre

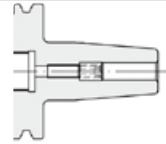
p. 53



CTO 4,5° Standard (similar to DIN 69882-8)

Mandrino per calettamento termico
Shrink fit chuck
Porte-outils de frettage
Schrumpfutter

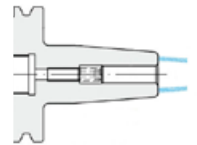
p. 54



CTW 4,5° Standard (Cooling Plus)

Mandrino per calettamento termico con canali di lubrificazione
Shrink fit chuck with coolant bores
Porte-outils de frettage avec conduits d'arrosage
Schrumpfutter mit Kühlmittelbohrung

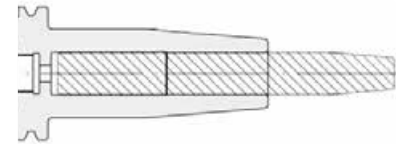
p. 56



CTP 4,5° (without back up screw)

Mandrino per calettamento termico estensibile, adatto per prolunghe
Extensible shrink fit-chuck suitable for extensions
Porte outils de frettage prolongeable approprié pour rallonges
Verlängerbares schrumpfutter geeignet für verlängerungs

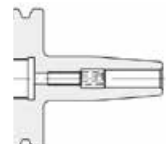
p. 57



CTF 4,5° (Slim)

Mandrino per calettamento termico di finitura
Finishing shrink fit chuck
Porte outils de frettage pour finissage
Schrumpfutter zum schlichten

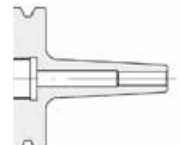
p. 58



CTF 3° (Slim) (without back up screw)

Mandrino per calettamento termico. Ideale per la costruzione di STAMPI e cavità profonde
Shrink fit chuck. Suitable for the MOLD and for deep cavities
Porte outils de frettage. Idéal pour la construction de MOLD et des cavités profondes
Schrumpfutter für tiefe Kavitäten geeignet, speziell für den Gesenk, und Formenbau

p. 59

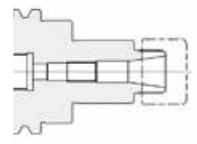


ERH

(High Performance)

Portapinze di precisione ER DIN 6499
Precision collet chuck ER DIN 6499
Porte pincas de precision ER DIN 6499
Präzisions spannzangenfutter ER DIN 6499

p. 60

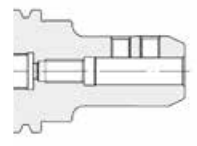


PU

(DIN 6535 HB - HE)

Mandrino portapunte
Adapter for drilling tools
Porte-foret
Aufnahme für Vollbohrer

p. 63



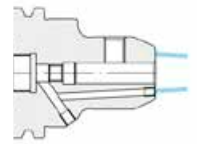
WEW

(Cooling Plus)

(DIN 1835-B / 6535 HB)

Mandrini per attacchi Weldon – WN con canali di lubrificazione
Weldon – WN toolholders with coolant bores
Porte outils Weldon – WN avec conduits d'arrosage
Weldon-WN aufnahme mit kühlmittelbohrung

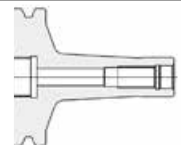
p. 66



MDO

Portafrese con filetto interno, per frese con attacco filettato
Cutter-Holder with modular threaded connection
Mandrin Porte-Fraise avec attachement modulaire fileté
Fräseraufnahme mit modular-gewinde aufnahme

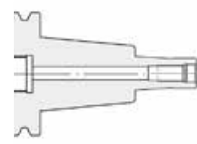
p. 68

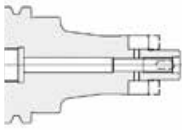
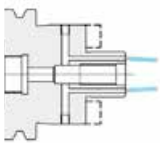
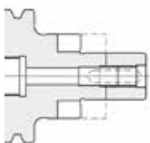
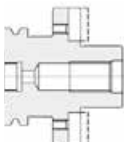
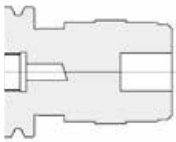
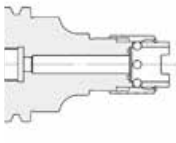
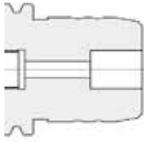
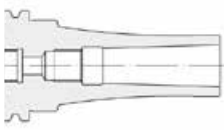
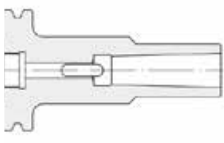
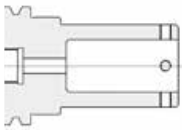
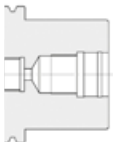


MDR

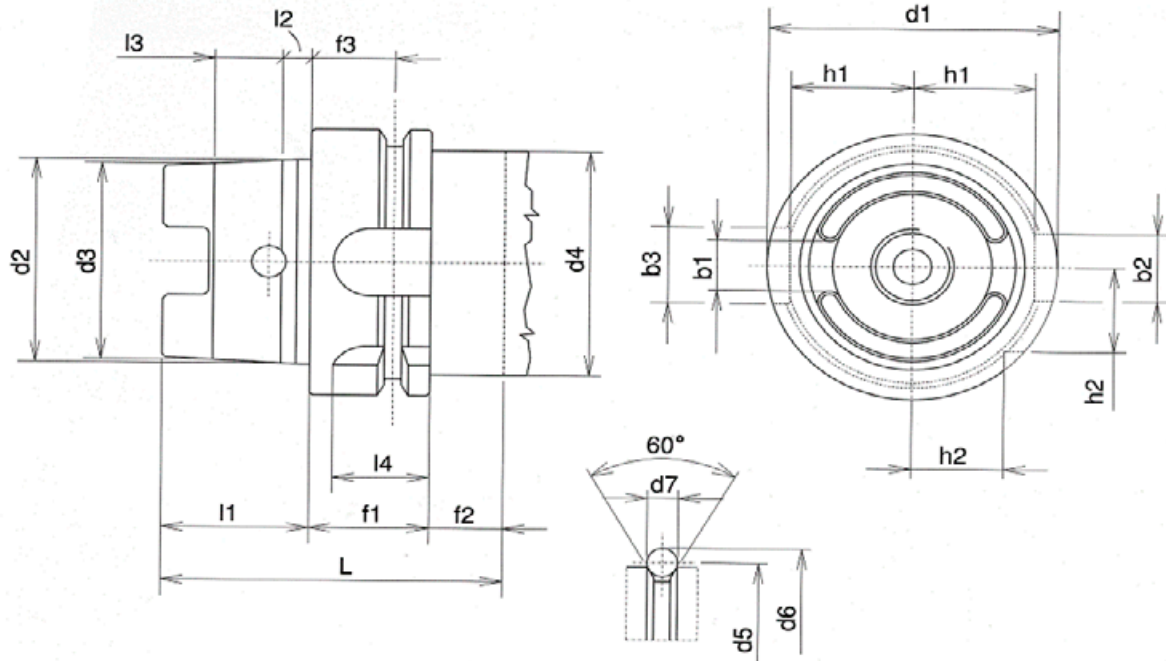
Portafrese Rinforzato con filetto interno, per frese con attacco filettato
Cutter-Holder with modular threaded connection
Mandrin Porte-Fraise avec attachement modulaire fileté
Fräseraufnahme mit modular-gewinde aufnahme

p. 69



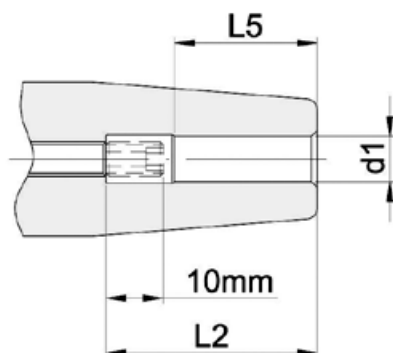
FM	Portafrese combinato per frese a manicotto e a disco - Con trascinatore frontale fisso e linguetta Combi face mill holder for shell-end and disc milling cutters Kombidorn Porte-fraise avec entrainement combine	p. 71	
FSW (Cooling Plus) (DIN 6357 B)	Portafrese a spianare con trascinatore fisso - con canali di lubrificazione Face mill arbor with coolant bores Porte-fraises à surfacer avec conduits d'arrosage Messerkopf- aufnahme mit Kühlmittelbohrun	p. 72	
FC (DIN 6358)	Portafrese combinato con trascinatore mobile Kmbi-shell mill arbor Porte-fraise a double usage Kombi-aufsteckfräsdorne	p. 74	
FF (DIN 6357-A / DIN 2079)	Portafrese flangiati per frese a spianare Face mill holder for face milling cutters Porte-fraise pour fraises a surfacer Aufsteckfräserdorne für messerköpfe	p. 75	
MC	Maschiatore a cambio rapido con compensazione assiale senza passaggio lubrificante Quick change tapping chuck with axial compensation without coolant flow Appareil à thrauder avec changement rapid avec compensation axiale Gewindeschneidfutter mit doppel längenausgleich	p. 76	
MR	Maschiatore a cambio rapido senza compensazione assiale con passaggio lubrificante Quick change tapping chuck without axial compensation with coolant flow Appareil à thrauder avec changement rapid sans compensation axiale Gewindeschneidfutter ohne längenausgleich	p. 77	
MS SINKRO	Maschiatore sincronizzato (per bussole ABM-ER) con passaggio lubrificante Sinkro tapping chucks (for Sinkro's tap adapter ABM-ER) with coolant flow Sinkro-Gewindeschneidfutter (für schnellwechseleinsätze Sinkro ABM.ER) Sinkro-appareil a taruder (pour douilles porte-taraud Sinkro ABM.ER)	p. 78	
RF (DIN 228-1 Form A)	Riduzione Cono Morse per frese Morse adapter for milling cutter Porte-fraise avec raccord CM Morse-kegel-aufnahme mit Anzuggewinde	p. 80	
RP (DIN 228-1 Form B)	Riduzione Cono Morse per punte Morse-adapter for drilling tools Porte-foret avec raccord CM Morse-kegel-aufnahme	p. 81	
DP	Sistema modulare DP Modular system DP	p. 82	
VAR	Sistema modulare VAR Modular system VAR	p. 82	

DIN 69893 - HSK A+C



	HSK 32	HSK 40	HSK 50	HSK 63	HSK 80	HSK 100
b1	7,05	8,05	10,54	12,54	16,04	20,02
b2	7	9	12	16	18	20
b3	9	11	14	18	20	22
d1	32	40	50	63	80	100
d2	24	30	38	48	60	75
d3	23,270	29,050	36,900	46,530	58,100	72,600
d4 (max)	26	34	42	53	67	85
d5	26,5	34,8	43	55	70	92
d6	37	45	59,3	72,3	88,8	109,75
d7	4	4	7	7	7	7
f1	20	20	26	26	26	29
f2	15	15	16	16	16	16
f3	16	16	18	18	18	20
f4	2	2	3,75	3,75	3,75	3,75
h1	13	17	21	26,5	34	44
h2	9,5	12	15,5	20	25	31,5
L	51	55	67	74	82	95
l1	16	20	25	32	40	50
l2	3,2	4	5	6,3	8	10
l3	7,3	9,5	11	14,7	19	24
l4	12	12	19	21	22	24

Shrink fit chuck



	L2		L5 minimum grip
Ø 6	37	M5 x 0,8	22
Ø 8	37	M6 x 1	26
Ø 10	42	M8 x 1	31
Ø 12	47	M10 x 1	36
Ø 14	47	M10 x 1	36
Ø 16	50	M12 x 1	39
Ø 18	50	M12 x 1	39
Ø 20	52	M16 x 1	41
Ø 25	58	M16 x 1	47
Ø 32	62	M16 x 1	51

ACCESSORI ACCESSORIES

ATR DIN 69895

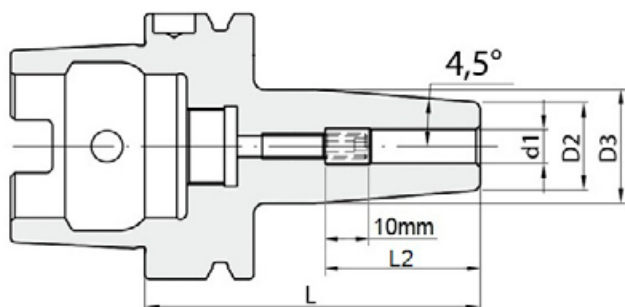
Tubetti per l'adduzione del refrigerante
Coolant tubes
Tubes d'arrosage
Kühlmittelrohre



codice code	dimensioni dimension Ø d1	applicazione application	
ATR.010.HK032	M10 x 1	HSK 032	ACH.ATR032
ATR.012.HK040	M12 x 1	HSK 040	ACH.ATR040
ATR.016.HK050	M16 x 1	HSK 050	ACH.ATR050
ATR.018.HK063	M18 x 1	HSK 063	ACH.ATR063
ATR.020.HK080	M20x1,5	HSK 080	ACH.ATR080
ATR.024.HK100	M24x1,5	HSK 100	ACH.ATR100



grip-plus
shrink fit technology



d1 = 3-4-5 VEDI - SEARCH "CTF"

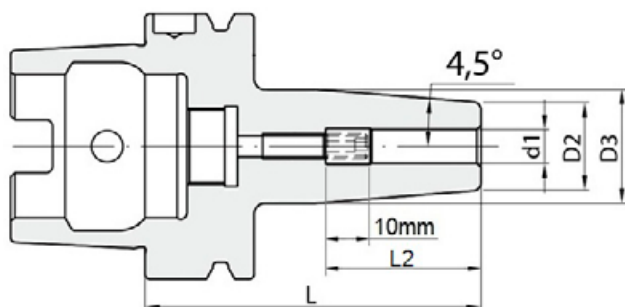


codice - code

dati tecnici - technical data

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HSK 040 (A+C) form						
HKA.040.CT006.080	6	80	21	27		
HKA.040.CT008.080	8	80	21	27		
HKA.040.CT010.080	10	80	24	32		
HKA.040.CT012.090	12	90	24	32		
HKA.040.CT016.090	16	90	27	34		
HSK 050 (A+C) form						
HKA.050.CT006.080	6	80	21	27		
HKA.050.CT008.080	8	80	21	27		
HKA.050.CT010.085	10	85	24	32		
HKA.050.CT012.090	12	90	24	32		
HKA.050.CT016.095	16	95	27	34		
HSK 063 (A+C) form						
HKA.063.CT006.080	6	80	21	27		
HKA.063.CT008.080	8	80	21	27		
HKA.063.CT010.085	10	85	24	32		
HKA.063.CT012.090	12	90	24	32		
HKA.063.CT014.090	14	90	27	34		
HKA.063.CT016.095	16	95	27	34		
HKA.063.CT018.095	18	95	33	42		
HKA.063.CT020.100	20	100	33	42		
HKA.063.CT025.115	25	115	44	53		
HKA.063.CT032.120	32	120	44	53		
L.130 d1 = 25 / 32 VEDI - SEARCH "CTP"						
HKA.063.CT006.130	6	130	21	27		
HKA.063.CT008.130	8	130	21	27		
HKA.063.CT010.130	10	130	24	32		
HKA.063.CT012.130	12	130	24	32		
HKA.063.CT014.130	14	130	27	34		
HKA.063.CT016.130	16	130	27	34		
HKA.063.CT018.130	18	130	33	42		
HKA.063.CT020.130	20	130	33	42		
HKA.063.CT006.160	6	160	21	27		
HKA.063.CT008.160	8	160	21	27		
HKA.063.CT010.160	10	160	24	32		
HKA.063.CT012.160	12	160	24	32		
HKA.063.CT014.160	14	160	27	34		
HKA.063.CT016.160	16	160	27	34		
HKA.063.CT018.160	18	160	33	42		
HKA.063.CT020.160	20	160	33	42		
HKA.063.CT025.160	25	160	44	53		

grip-plus
shrink fit technology



codice - code

dati tecnici - technical data

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HSK 100 (A+C) form						
HKA.100.CT006.085	6	85	21	27		
HKA.100.CT008.085	8	85	21	27		
HKA.100.CT010.090	10	90	24	32		
HKA.100.CT012.095	12	95	24	32		
HKA.100.CT014.095	14	95	27	34		
HKA.100.CT016.100	16	100	27	34		
HKA.100.CT018.100	18	100	33	42		
HKA.100.CT020.105	20	105	33	42		
HKA.100.CT025.115	25	115	44	53		
HKA.100.CT032.120	32	120	44	53		
HKA.100.CT006.130	6	130	21	27		
HKA.100.CT008.130	8	130	21	27		
HKA.100.CT010.130	10	130	24	32		
HKA.100.CT012.130	12	130	24	32		
HKA.100.CT014.130	14	130	27	34		
HKA.100.CT016.130	16	130	27	34		
HKA.100.CT018.130	18	130	33	42		
HKA.100.CT020.130	20	130	33	42		
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HKA.100.CT006.160	6	160	21	27		
HKA.100.CT008.160	8	160	21	27		
HKA.100.CT010.160	10	160	24	32		
HKA.100.CT012.160	12	160	24	32		
HKA.100.CT014.160	14	160	27	34		
HKA.100.CT016.160	16	160	27	34		
HKA.100.CT018.160	18	160	33	42		
HKA.100.CT020.160	20	160	33	42		
HKA.100.CT025.160	25	160	44	53		
HKA.100.CT032.160	32	160	44	53		

Accessori | Accessories

ATR



p. 53

Ricambi | Spare parts

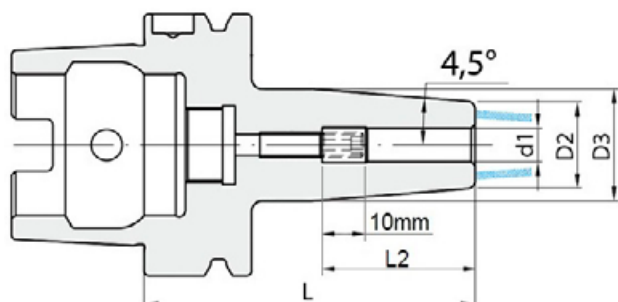
RVR CT



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grip-plus
shrink fit technology



codice - code

dati tecnici - technical data

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HSK 063 (A+C) form						
HKA.063.CTW06.080	6	80	21	27		
HKA.063.CTW08.080	8	80	21	27		
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HKA.063.CTW12.090	12	90	24	32		
HKA.063.CTW14.090	14	90	27	34		
HKA.063.CTW16.095	16	95	27	34		
HKA.063.CTW18.095	18	95	33	42		
HKA.063.CTW20.100	20	100	33	42		
HKA.063.CTW25.115	25	115	44	53		
HKA.063.CTW32.120	32	120	44	53		
HKA.063.CTW06.130	6	130	21	27		
HKA.063.CTW08.130	8	130	21	27		
HKA.063.CTW10.130	10	130	24	32		
HKA.063.CTW12.130	12	130	24	32		
HKA.063.CTW14.130	14	130	27	34		
HKA.063.CTW16.130	16	130	27	34		
HKA.063.CTW18.130	18	130	33	42		
HKA.063.CTW20.130	20	130	33	42		



Accessori | Accessories

ATR



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Ricambi | Spare parts

RVR CTW



p. 186

HSK A+C
DIN 69893-1

CTP 4,5°
(without back up screw)

Mandrino per calettamento termico estensibile, adatto per prolunghe
Extensible shrink fit-chuck suitable for extensions
Porte outils de frettage prolongeable approprié pour rallonges
Verlängerbares schrumpffutter geeignet für verlängerungs

G 2,5
25.000 RPM
or
U < 1 gmm

≤ 3 µm

4,5°

EXTENSIBLE

HSS h6

HM h6

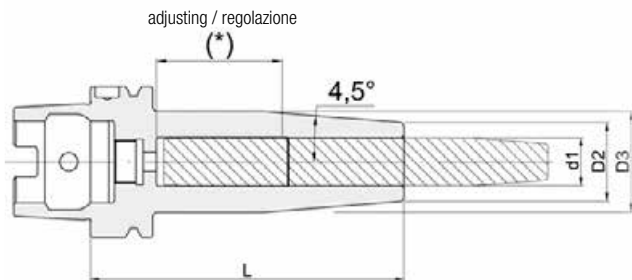
HSC

HPC

CHIP

grip-plus

shrink fit technology



codice - code

dati tecnici - technical data

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HKA.063.CTP20.080	20	80	38	47	0	(EXTRA SHORT)
HKA.063.CTP25.085	25	85	44	52	0	(EXTRA SHORT)
HKA.063.CTP32.090	32	90	44	52	0	(EXTRA SHORT)
HKA.063.CTP12.130	12	130	24	32	50	
HKA.063.CTP16.130	16	130	27	34	57	
HKA.063.CTP20.130	20	130	33	42	55	
HKA.063.CTP25.130	25	130	44	52	49	
HKA.063.CTP32.130	32	130	44	52	45	
HSK 100 (A+C) form						
HKA.100.CTP16.085	16	85	33	41	0	(EXTRA SHORT)
HKA.100.CTP20.085	20	85	38	46	0	(EXTRA SHORT)
HKA.100.CTP25.090	25	90	44	53	0	(EXTRA SHORT)
HKA.100.CTP32.095	32	95	44	54	0	(EXTRA SHORT)
HKA.100.CTP16.130	16	130	27	34	57	
HKA.100.CTP20.130	20	130	33	42	55	
HKA.100.CTP25.130	25	130	44	53	49	
HKA.100.CTP32.130	32	130	44	53	45	

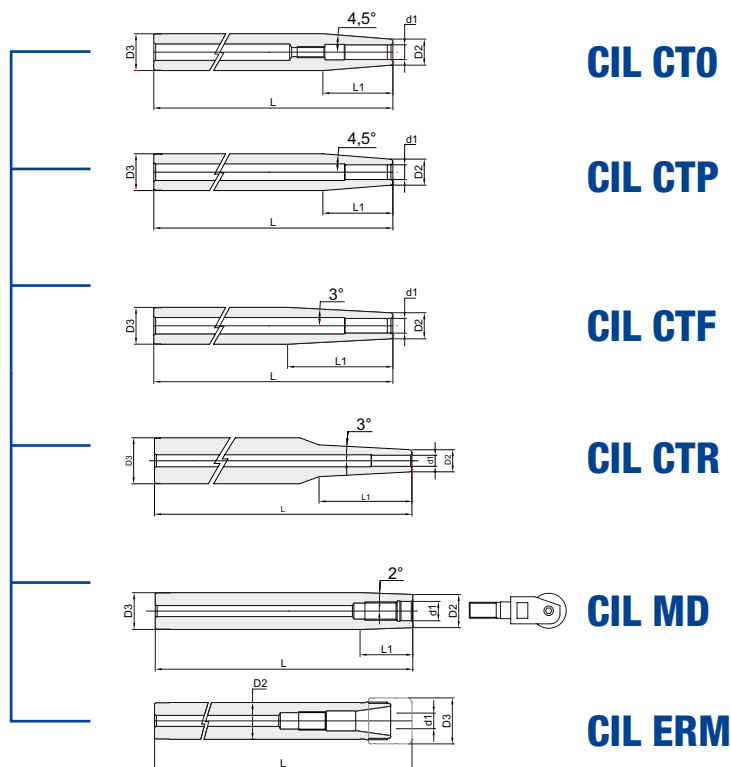


Accessori | Accessories

ATR



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HSK A+C
DIN 69893-1

CTF 4,5°
(Slim)

Mandrino per calettamento termico di finitura
Finishing shrink fit chuck
Porte outils de frettage pour finissage
Schrumpfutter zum schlichten

G 2,5
25.000 RPM
or
U < 1 gmm

≤ 3 μm

4,5°

Ø 3 - 4 - 5

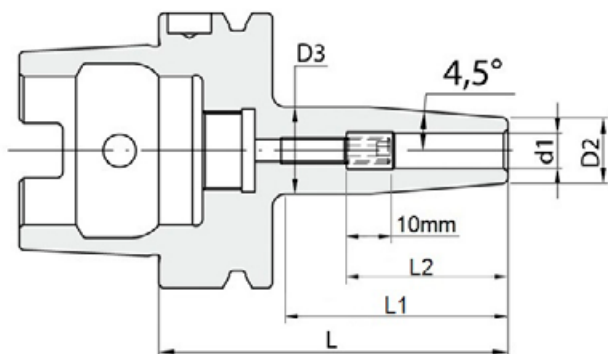


HM h6

HSC

CHIP

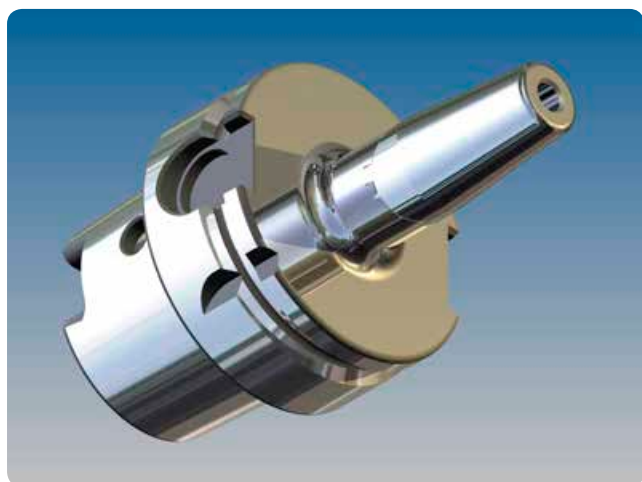
grip-plus
shrink fit technology



codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 040 (A+C) form						
HKA.040.CTF03.060- 4,5°	3	60	9	16	No RVR	
HKA.040.CTF04.060- 4,5°	4	60	10	16	No RVR	
HKA.040.CTF05.060- 4,5°	5	60	11	16	No RVR	
HKA.040.CTF06.130- 4,5°	6	130	15	30		
HKA.040.CTF08.130- 4,5°	8	130	15	30		
HKA.040.CTF10.130- 4,5°	10	130	18	30		
HKA.040.CTF12.130- 4,5°	12	130	18	30		
HSK 050 (A+C) form						
HKA.050.CTF03.080- 4,5°	3	80	9	18	No RVR	
HKA.050.CTF04.080- 4,5°	4	80	10	18	No RVR	
HKA.050.CTF05.080- 4,5°	5	80	11	18	No RVR	
HKA.050.CTF06.080- 4,5°	6	80	15	20		
HKA.050.CTF08.080- 4,5°	8	80	15	20		
HKA.050.CTF10.085- 4,5°	10	85	18	25		
HSK 063 (A+C) form						
HKA.063.CTF03.080- 4,5°	3	80	9	16,8	No RVR	
HKA.063.CTF04.080- 4,5°	4	80	10	17,8	No RVR	
HKA.063.CTF05.080- 4,5°	5	80	11	18,8	No RVR	
HKA.063.CTF06.080- 4,5°	6	80	15	20		
HKA.063.CTF08.080- 4,5°	8	80	15	20		
HKA.063.CTF10.085- 4,5°	10	85	18	25		
HKA.063.CTF12.090- 4,5°	12	90	18	25		
HKA.063.CTF03.130- 4,5°	3	130	9	24,6	No RVR	
HKA.063.CTF04.130- 4,5°	4	130	10	25,6	No RVR	
HKA.063.CTF05.130- 4,5°	5	130	11	26,6	No RVR	
HKA.063.CTF06.130- 4,5°	6	130	15	30,6		
HKA.063.CTF08.130- 4,5°	8	130	15	30,6		
HKA.063.CTF10.130- 4,5°	10	130	18	33,6		
HKA.063.CTF12.130- 4,5°	12	130	18	33,6		



Accessori | Accessories

ATR



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Ricambi | Spare parts

RVR CT



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HSK A+C
DIN 69893-1

CTF 3° (Slim)
(without back up screw)

Mandrino per calettamento termico. Ideale per la costruzione di STAMPI e cavità profonde
Shrink fit chuck. Suitable for the MOLD and for deep cavities
Porte outils de frettage. Idéal pour la construction de MOLD et des cavités profondes
Schrumpfutter für tiefe Kavitäten geeignet, speziell für den Gesenk, und Formenbau

G 2,5
25.000 RPM
or
U < 1 gmm

≤ 3 μm

3°

3°

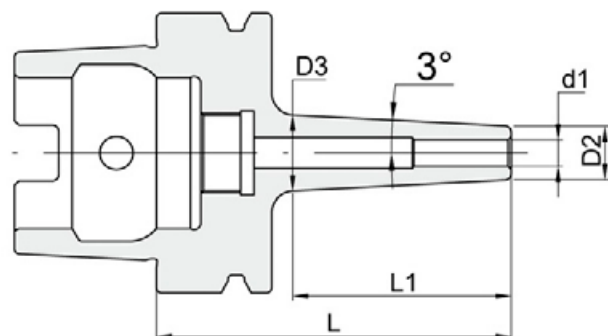
HM

h6

HSC

CHIP

grip-plus
shrink fit technology

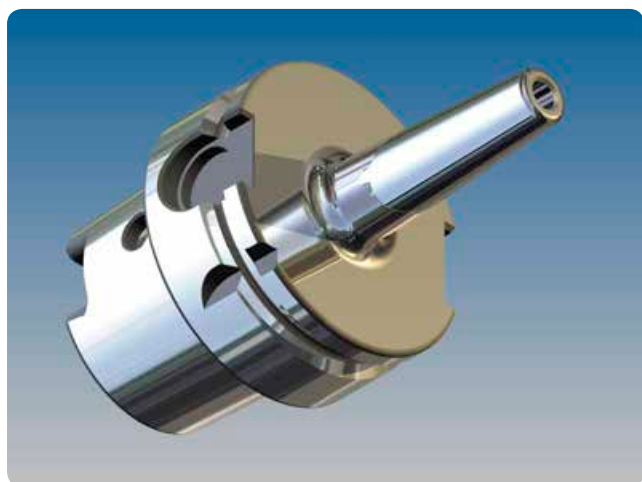


spessore parete 3 mm - 3 mm wall thickness

codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	L1	-
HSK 063 (A+C) form						
HKA.063.CTF03.080- 3°	3	80	9	14,2	49	
HKA.063.CTF04.080- 3°	4	80	10	15,2	49	
HKA.063.CTF05.080- 3°	5	80	11	16,2	49	
HKA.063.CTF06.080- 3°	6	80	12	17,2	49	
HKA.063.CTF08.080- 3°	8	80	14	19,2	49	
HKA.063.CTF10.085- 3°	10	85	16	21,7	54	
HKA.063.CTF12.090- 3°	12	90	18	24,2	59	
HKA.063.CTF03.130- 3°	3	130	9	18,4	90	
HKA.063.CTF04.130- 3°	4	130	10	19,4	90	
HKA.063.CTF05.130- 3°	5	130	11	20,4	90	
HKA.063.CTF06.130- 3°	6	130	12	21,4	90	
HKA.063.CTF08.130- 3°	8	130	14	23,4	90	
HKA.063.CTF10.130- 3°	10	130	16	25,4	90	
HKA.063.CTF12.130- 3°	12	130	18	27,4	90	

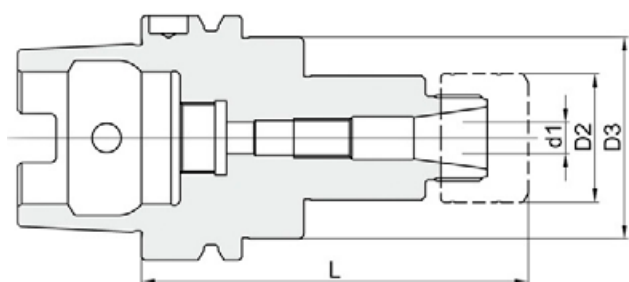


Accessori | Accessories

ATR



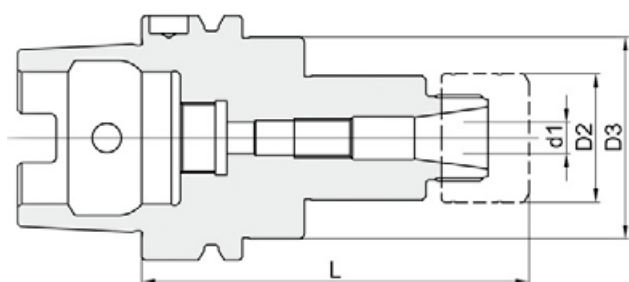
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codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	NUTS	-
HSK 032 (A+C) form						
HKA.032.ERH16.080	0,5-10	80	32		RGE	
HSK 040 (A+C) form						
HKA.040.ERH16.080	0,5-10	80	32		RGE	
HKA.040.ERH25.080	1,5-16	80	42		RGE	No RVR
HKA.040.ERH32.100	2,5-20	100	50		RGE	
HSK 050 (A+C) form						
HKA.050.ERH16.100	05-10	100	32	40	RGE	
HKA.050.ERH25.080	1,5-16	80	42		RGE	No RVR
HKA.050.ERH32.070	2,5-20	70	50		RGE	No RVR
HSK 063 (A+C) form						
HKA.063.ERH11.100	0,5-7	100	25	52	RGX	
HKA.063.ERH16.075	0,5-10	75	32	52	RGE	No RVR
HKA.063.ERH16.100	0.5-10	100	32	52	RGE	
HKA.063.ERH16.130	0.5-10	130	32	52	RGE	
HKA.063.ERH16.160	0.5-10	160	32	52	RGE	
HKA.063.ERH16.200.	0.5-10	200	32	52	RGE	
HKA.063.ERH20.100	1-13	100	35	52	RGE	
HKA.063.ERH20.160	1-13	160	35	52	RGE	
HKA.063.ERH25.075	1,5-16	75	42	52	RGE	No RVR
HKA.063.ERH25.100	1.5-16	100	42	52	RGE	
HKA.063.ERH25.140.	1.5-16	140	42	52	RGE	
HKA.063.ERH25.160	1,5-16	160	42	52	RGE	
HKA.063.ERH25.200.	1.5-16	200	42	52	RGE	
HKA.063.ERH32.075	2,5-20	75	50	52	RGE	No RVR
HKA.063.ERH32.100	2.5-20	100	50	52	RGE	
HKA.063.ERH32.140.	2.5-20	140	50	52	RGE	
HKA.063.ERH32.160	2,5-20	160	50	52	RGE	
HKA.063.ERH32.200.	2.5-20	200	50	52	RGE	
HKA.063.ERH40.080	3-26	80	63		RGE	No RVR
HKA.063.ERH40.160	3-26	160	63		RGE	



codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	NUTS	-
HSK 100 (A+C) form						
HKA.100.ERH16.120	0,5-10	120	32	84.5	RGE	
HKA.100.ERH16.160	0.5-10	160	32	84.5	RGE	
HKA.100.ERH16.200	0.5-10	200	32	84.5	RGE	
HKA.100.ERH25.120	1.5-16	120	42	84.5	RGE	
HKA.100.ERH25.160	1.5-16	160	42	84.5	RGE	
HKA.100.ERH25.200	1.5-16	200	42	84.5	RGE	
HKA.100.ERH32.120	2.5-20	120	50	84.5	RGE	
HKA.100.ERH32.160	2.5-20	160	50	84.5	RGE	
HKA.100.ERH32.200	2.5-20	200	50	84.5	RGE	
HKA.100.ERH40.120	3-26	120	63	84.5	RGE	
HKA.100.ERH40.180	3-26	180	63	84.5	RGE	



Optional

RGE - HSC (DIN 6499) Fine Balanced - Coated



Accessori | Accessories

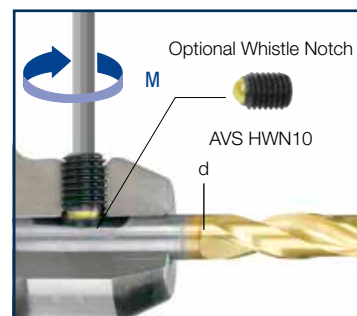


Ricambi | Spare parts

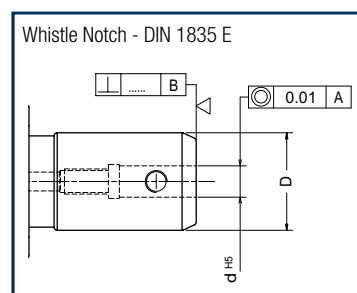
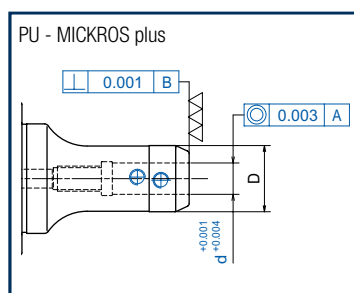


Particolare attenzione ha prestato la MICKROS plus a questa operazione, progettando e realizzando il prodotto "PU" che presenta i seguenti vantaggi rispetto ai tradizionali portautensili con attacco Whistle Notch (DIN 1835-E):

- Minore ingombro come illustrato in tabella
- Maggiore precisione di concentricità
- Maggiore precisione di coassialità
- Minore peso e maggiore bilanciabilità
- Maggiore resistenza alla torsione grazie alla posizione disassata dei grani di serraggio utensile.
- Possibilità di utilizzo di punte ad inserto con gambo diam. 40 anche su attacchi HSK 63
- Maggiore rigidità soprattutto nell'utilizzo di punte ad inserto con battuta
- Possibilità di utilizzare utensili di precisione con battuta (ottima applicazione con utensili speciali)
- Possibilità di usare grano con semisfera basculante **AVS HWN 10** dal diam. 14 ÷ 25 per attacchi Whistle Notch.



d	Ø D - DIN 1835-E Whistle Notch	Ø D - MICKROS plus PU
14	48	36
16	48	38
18	52	40
20	52	42
25	63	48
32	71	58
40	-	64



MICKROS plus lent particular attention to this operation, designing and building the product "PU" that offers the following advantages in respect to the traditional toolbox with Whistle Notch fastening (DIN 1835-E):

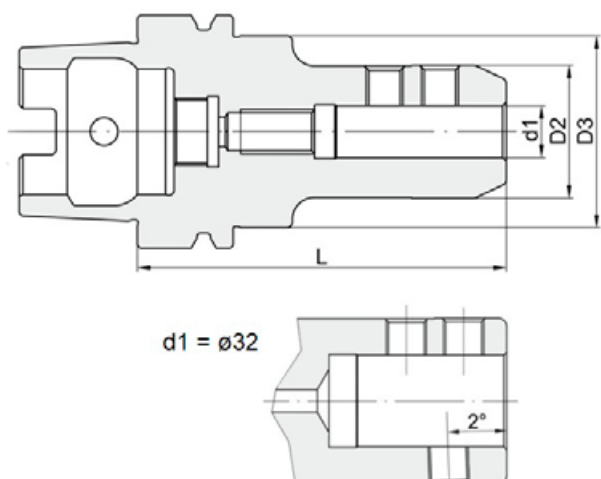
- Fewer obstacles as shown in table
- Greater concentricity precision
- Greater axial precision
- Less weight and better balance
- Greater resistance to torsion thanks to offset position of tool tightening grains
- Possible to use insertion tips with stem diameter 40 also on HSK 63
- Greater rigidity above all in the use of tips to insert with abutting end
- Possible to use precision tools with abutting end (excellent application with special tools).

MICKROS plus a prêté une attention particulière à cette opération en concevant et en réalisant le produit "PU" qui présente les avantages suivants par rapport aux porte-outils traditionnels avec attache Whistle Notch (DIN 1835-E):

- Encombrement mineur comme illustré dans le tableau
- Plus grande précision de concentricité
- Plus grande précision de coaxialité
- Poids plus petit et plus grand équilibrage
- Plus grande résistance à la torsion grâce à la position désaxée des grains de serrage de l'outil
- Possibilité d'utilisation de forets à insertion avec tige de diamètre 40 même sur attaches HSK 63
- Plus grande rigidité surtout dans l'utilisation de forets à insertion avec butée
- Possibilité d'utiliser des outils de précision avec butée (application optimale avec des outils spéciaux)
- Possibility to use screw with horizontally pivoted halfsphere AVS HWN 10 from Ø 14 to Ø 25 for Whistle Notch type.

MICKROS plus hat besondere Aufmerksamkeit auf diese Bearbeitungsform verwendet und das Produkt "PU" entwickelt und realisiert, das im Vergleich zu den traditionellen Werkzeugträgern mit Aufnahme Whistle Notch (DIN 1835-E) folgende Vorteile aufweist:

- Geringere Abmessungen wie in der Tabelle dargestellt
- Größere Genauigkeit der Konzentrität
- Größere Präzision der Koaxialität
- Geringeres Gewicht und größere Auswuchtfähigkeit
- Größere Torsionsbeständigkeit dank der außerachsigen Position der Werkzeugspannstifte
- Möglichkeit zur Nutzung von Spitzeneinsätzen mit Schaftdurchmesser 40 auch an Aufnahmen HSK 63
- Größere Festigkeit vor allem bei Verwendung von Spitzeneinsätzen mit Anschlag
- Möglichkeit zur Verwendung von Präzisionswerkzeugen mit Anschlag (optimale Anwendung mit Spezialwerkzeugen).



codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 063 (A+C) form						
HKA.063.PU014.100	14	100	36	52		
HKA.063.PU016.100	16	100	38	52		
HKA.063.PU018.100	18	100	40	52		
HKA.063.PU020.100	20	100	42	52		
HKA.063.PU025.090	25	90	48		No RVR	
HKA.063.PU032.090	32	90	58		No RVR	
HKA.063.PU040.100	40	100	63		No RVR	
HSK 100 (A+C) form						
HKA.100.PU014.140	14	140	36	52		
HKA.100.PU016.140	16	140	38	52		
HKA.100.PU018.140	18	140	40	52		
HKA.100.PU020.140	20	140	42	52		
HKA.100.PU025.130	25	130	48			
HKA.100.PU032.130	32	130	58		No RVR	
HSK 100 (A+C) form						
HKA.100.PU014.140	14	140	36	84.5		
HKA.100.PU016.140	16	140	38	84.5		
HKA.100.PU018.140	18	140	40	84.5		
HKA.100.PU020.140	20	140	42	84.5		
HKA.100.PU025.130	25	130	48	84.5		
HKA.100.PU032.130	32	130	58	84.5	No RVR	
HKA.100.PU040.130	40	130	68	84.5	No RVR	
HKA.100.PU050.130	50	130	76	84.5	No RVR	
HSK 100 (A+C) form						
HKA.100.PU025.160	25	160	48	84.5		
HKA.100.PU032.160	32	160	58	84.5	No RVR	
HKA.100.PU040.160	40	160	68	84.5	No RVR	
HSK 100 (A+C) form						
HKA.100.PU014.200	14	200	36	84.5		
HKA.100.PU016.200	16	200	38	84.5		
HKA.100.PU018.200	18	200	40	84.5		
HKA.100.PU020.200	20	200	42	84.5		
HKA.100.PU025.200	25	200	48	84.5		

Accessori | Accessories



Ricambi | Spare parts



Tutti i mandrini WEW - WEH Mickros Plus dal diam. 6 al diam. 12 possono montare sia frese con gambo Weldon (DIN 1835-B) che punte con gambo Whistle Notch (DIN 1835-E) grazie al Kit optional "AVK WN..." composto da:

- Vite speciale con sfera oscillante per il serraggio di utensili con piano inclinato 2° "AVSH WN..."
- Grano di battuta per la regolazione assiale dell'utensile "RVR..."

Vantaggi:

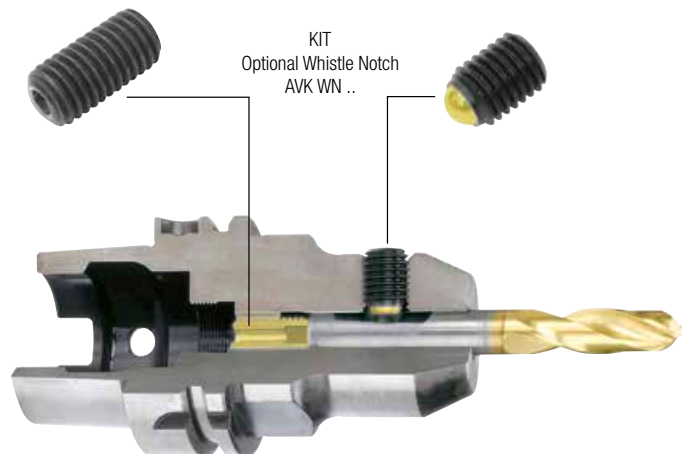
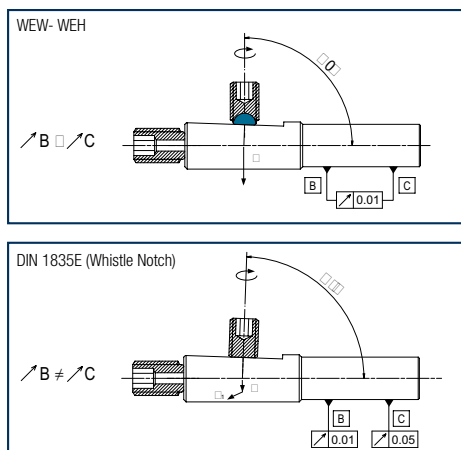
- Maggiore flessibilità: forare e fresare con un unico mandrino.
- Riduzione dei costi: nella maggioranza dei casi può sostituire i sistemi di serraggio idraulici.
- Maggiore precisione in foratura; la vite di serraggio con sfera spianata basculante blocca l'utensile agendo come un cuscinetto ed elimina l'attrito tra i piani (cosa che normalmente avviene con i sistemi DIN 1835E Whistle Notch a vite inclinata 2°) evitando la perdita di precisione in coassialità dovuta ad errori angolari (F; F1).

All of the spindles WEW - WEH Mickros Plus diameter from 6 to 12 can mount both cutters with Weldon stem (DIN 1835-B) and tips with Whistle Notch stem (DIN 1835-E) thanks to the Kit optional "AVK WN". Made up of:

- Special screw with oscillating sphere for the tightening of tools with inclined layout 2° "AVSH WN".
- Sprig striking beat for axial regulation of the "RVR" tool

Advantages:

- Greater flexibility: punch and mill with a single spindle.
- Lower costs: in most cases it can replace hydraulic tightening systems.
- Greater punching precision; the tightening screws with self-stabilizing levelled sphere blocks the tool while acting as a bearing and eliminating friction between the levels (which normally happens with DIN 1835 Whistle Notch systems with 2° inclined screw) and avoiding the loss of axial precision due to angular errors (F; F1).



Toutes les broches WEW - WEH Mickros Plus de diam. 6 au diam. 12 peuvent porter des fraises avec tige Weldon (DIN 1835-B) ainsi que des forets avec tige Whistle Notch (DIN 1835-E) grâce au jeu "AVK WN..." en option composé de:

- Vis spéciale avec bille oscillante pour le serrage des outils avec plan incliné 2° «AVSH WN...»
- Grain de butée pour la régulation axiale de l'outil "RVR..."

Avantages:

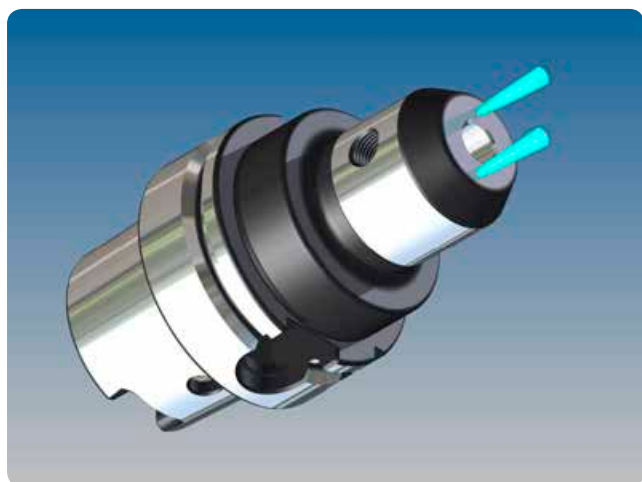
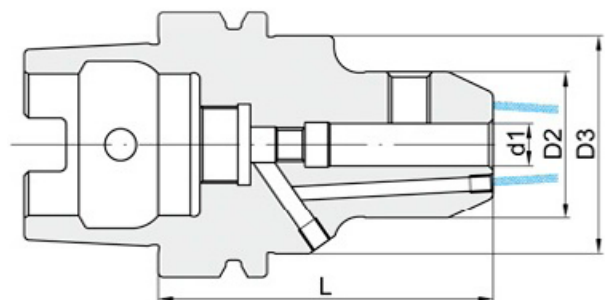
- Plus grande flexibilité: percer et fraiser avec une unique broche.
- Réduction des coûts: dans la plupart des cas, elle peut remplacer les systèmes de serrages hydrauliques.
- Plus grande précision dans le perçage, la vis de serrage avec bille plate oscillante bloque l'outil en agissant comme un coussinet et élimine le frottement entre les plans (chose qui arrive normalement avec les systèmes DIN 1835E Whistle Notch à vis inclinée 2°) en évitant la perte de précision en coaxialité due à des erreurs angulaires (F; F1).

Bei allen Werkzeugafnahmen WEW - WEH Mickros Plus von Durchmesser 6 bis Durchmesser 12 können sowohl Werkzeuge mit Schaft Weldon (DIN 1835-B) als auch Werkzeuge mit Schaft Whistle Notch (DIN 1835-E) montiert werden. Dazu ist optional das Kit "AVK WN..." erhältlich, das aus folgenden Elementen besteht:

- Spezialschraube mit Schwingkugel für das Einspannen von Werkzeugen mit 2° geneigter Ebene „AVSH WN...“
- Anschlagstift für die Axialregelung des Werkzeugs „RVR...“.

Vorteile:

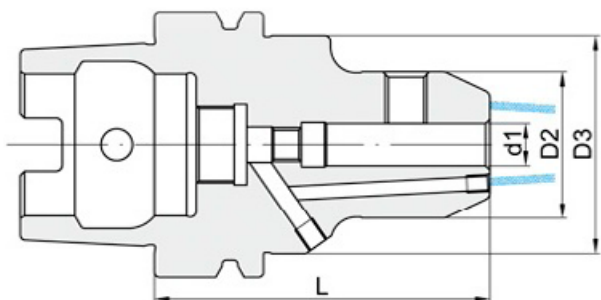
- Größere Flexibilität: Bohren und Fräsen mit einer einzigen Werkzeugaufnahme.
- Reduzierung der Kosten: Kann in den meisten Fällen die hydraulischen Einspannsysteme ersetzen.
- Größere Bohrpräzision: Die Spannschraube mit abgeflachter Schwingkugel blockiert das Werkzeug, indem es wie ein Lager wirkt, und vermeidet Reibung zwischen den Ebenen (die normalerweise mit den Systemen DIN 1835E Whistle Notch mit 2° geneigter Schraube eintritt), so dass ein Verlust der Koaxialitätspräzision durch Winkelfehler vermieden wird (F; F1).



codice - code

dati tecnici - technical data

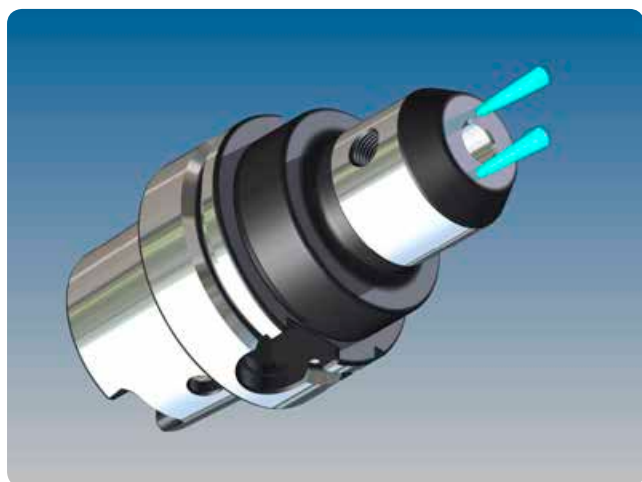
	Ø d1	L	Ø D2	Ø D3	-	-
HSK 063 (A+C) form						
HKA.063.WEW06.075	6	75	25	52		
HKA.063.WEW08.075	8	75	28	52		
HKA.063.WEW10.080	10	80	35	52		
HKA.063.WEW12.084	12	84	42	52		
HKA.063.WEW14.084	14	84	44	52		
HKA.063.WEW16.084	16	84	48			
HKA.063.WEW18.084	18	84	50			
HKA.063.WEW20.084	20	84	52			
HKA.063.WEW25.104	25	104	63			
HKA.063.WEW32.110	32	110	72			
HKA.063.WEW06.140	6	140	25	52		
HKA.063.WEW08.140	8	140	28	52		
HKA.063.WEW10.140	10	140	35	52		
HKA.063.WEW12.140	12	140	42	52		
HKA.063.WEW16.140	16	140	48	52		
HKA.063.WEW20.140	20	140	52	52		



codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 100 (A+C) form						
HKA.100.WEW06.080	6	80	25	84.5		
HKA.100.WEW08.080	8	80	28	84.5		
HKA.100.WEW10.085	10	85	35	84.5		
HKA.100.WEW12.085	12	85	42	84.5		
HKA.100.WEW14.085	14	85	44	84.5		
HKA.100.WEW14.100	14	100	44	84,5		
HKA.100.WEW16.100	16	100	48	84.5		
HKA.100.WEW18.100	18	100	50	84.5		
HKA.100.WEW20.100	20	100	52	84.5		
HKA.100.WEW25.110	25	110	65	84,5		
HKA.100.WEW32.110	32	110	72	84,5		
HKA.100.WEW40.120	40	120	84			
HKA.100.WEW06.140	6	140	25	84.5		
HKA.100.WEW08.140	8	140	28	84.5		
HKA.100.WEW10.140	10	140	35	84.5		
HKA.100.WEW12.140	12	140	42	84.5		
HKA.100.WEW16.140	16	140	48	84.5		
HKA.100.WEW20.140	20	140	52	84.5		
HKA.100.WEW25.160	25	160	65	84,5		
HKA.100.WEW32.160	32	160	72	84,5		
HKA.100.WEW40.160	40	160	84			
HKA.100.WEW06.200	6	200	25	84.5		
HKA.100.WEW08.200	8	200	28	84.5		
HKA.100.WEW10.200	10	200	35	84.5		
HKA.100.WEW12.200	12	200	42	84.5		
HKA.100.WEW16.200	16	200	48	84.5		
HKA.100.WEW20.200	20	200	52	84.5		
HKA.100.WEW25.200	25	200	65	84,5		
HKA.100.WEW32.200	32	200	72	84,5		
HKA.100.WEW40.200	40	200	84			

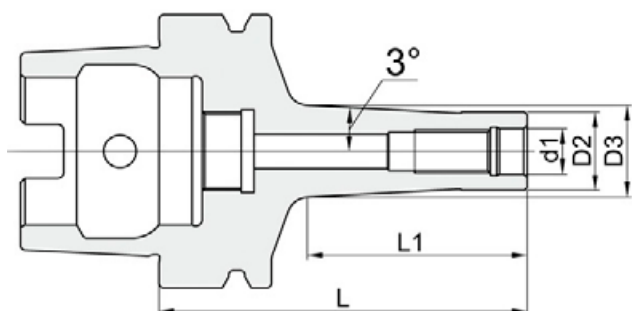


Accessori | Accessories



Ricambi | Spare parts





codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	L1	-
HSK 063 (A+C) form						
HKA.063.MD008.025	8,5-M8	60	13.5	14	25	
HKA.063.MD008.050	8,5-M8	85	13.5	16.5	50	
HKA.063.MD008.075	8,5-M8	110	13.5	19	75	
HKA.063.MD008.100	8,5-M8	135	13.5	22	100	
HKA.063.MD010.025	10,5-M10	60	18	18.5	25	
HKA.063.MD010.050	10,5-M10	85	18	21	50	
HKA.063.MD010.075	10,5-M10	110	18	24	75	
HKA.063.MD010.100	10,5-M10	135	18	26.5	100	
HKA.063.MD012.025	12,5-M12	60	21	21.5	25	
HKA.063.MD012.050	12,5-M12	85	21	24	50	
HKA.063.MD012.075	12,5-M12	110	21	27	75	
HKA.063.MD012.100	12,5-M12	135	21	29.5	100	
HKA.063.MD016.025	17-M16	60	29	29.5	25	
HKA.063.MD016.050	17-M16	85	29	32	50	
HKA.063.MD016.075	17-M16	110	29	35	75	
HKA.063.MD016.100	17-M16	135	29	37.5	100	



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MDM

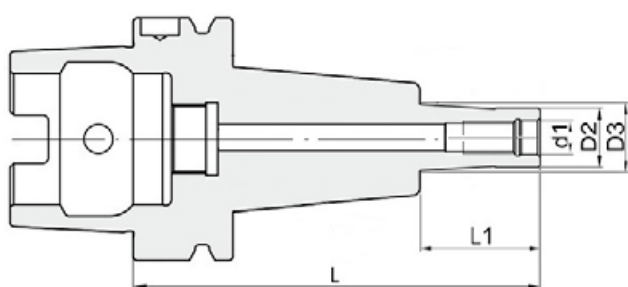


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MDM ER



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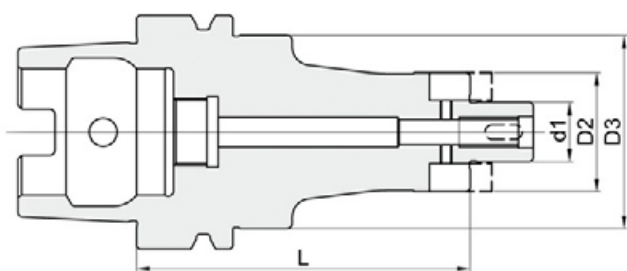
codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	L1	-
HSK 063 (A+C) form						
HKA.063.MDR08.025	8,5-M8	110	13,5		25	
HKA.063.MDR08.050	8,5-M8	135	13,5	15	50	
HKA.063.MDR08.075	8,5-M8	160	13,5	15	75	
HKA.063.MDR10.025	10,5-M10	115	18		25	
HKA.063.MDR10.050	10,5-M10	140	18	19	50	
HKA.063.MDR10.075	10,5-M10	165	18	19	75	
HKA.063.MDR10.100	10,5-M10	190	18	19	100	
HKA.063.MDR12.025	12,5-M12	115	21		25	
HKA.063.MDR12.050	12,5-M12	140	21	24	50	
HKA.063.MDR12.075	12,5-M12	165	21	24	75	
HKA.063.MDR12.100	12,5-M12	190	21	24	100	
HKA.063.MDR16.050	17-M16	145	29		50	
HKA.063.MDR16.075	17-M16	160	29	29	75	
HKA.063.MDR16.100	17-M16	195	29	29	100	
HKA.063.MDR16.125	17-M16	220	29	29	125	
HSK 100 (A+C) form						
HKA.100.MDR08.025	8,5-M8	115	13,5		25	
HKA.100.MDR08.050	8,5-M8	140	13,5	15	50	
HKA.100.MDR08.075	8,5-M8	165	13,5	15	75	
HKA.100.MDR10.025	10,5-M10	120	18		25	
HKA.100.MDR10.050	10,5-M10	145	18	19	50	
HKA.100.MDR10.075	10,5-M10	170	18	19	75	
HKA.100.MDR10.100	10,5-M10	195	18	19	100	
HKA.100.MDR12.025	12,5-M12	120	21		25	
HKA.100.MDR12.050	12,5-M12	145	21	24	50	
HKA.100.MDR12.075	12,5-M12	170	21	24	75	
HKA.100.MDR12.100	12,5-M12	195	21	24	100	
HKA.100.MDR16.050	17-M16	150	29		50	
HKA.100.MDR16.075	17-M16	175	29	29	75	
HKA.100.MDR16.100	17-M16	200	29	29	100	
HKA.100.MDR16.125	17-M16	225	29	29	125	

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codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	L1	-
HSK 063 (A+C) form						
HKA.063.FM016.065	16	65	32	52		
HKA.063.FM016.090	16	90	32	52		
HKA.063.FM016.145	16	145	32	52		
HKA.063.FM022.100	22	100	40	52		
HKA.063.FM022.150	22	150	40	52		
HKA.063.FM027.110	27	110	48	52		
HKA.063.FM027.155	27	155	48	52		
HKA.063.FM032.110	32	110	58	-		
HSK 100 (A+C) form						
HKA.100.FM016.090	16	90	32	84.5		
HKA.100.FM016.145	16	145	32	84.5		
HKA.100.FM022.100	22	100	40	84.5		
HKA.100.FM022.150	22	150	40	84.5		
HKA.100.FM022.200	22	200	40	84.5		
HKA.100.FM027.110	27	110	48	84.5		
HKA.100.FM027.155	27	155	48	84.5		
HKA.100.FM027.200	27	200	48	84.5		
HKA.100.FM032.110	32	110	58	84.5		
HKA.100.FM032.155	32	155	58	84.5		



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RLU 6604



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RVU 5933

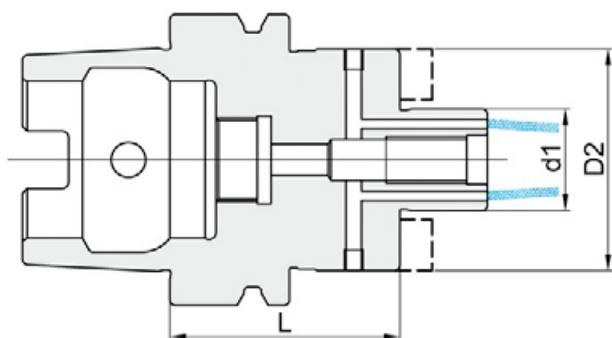


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RRS FM



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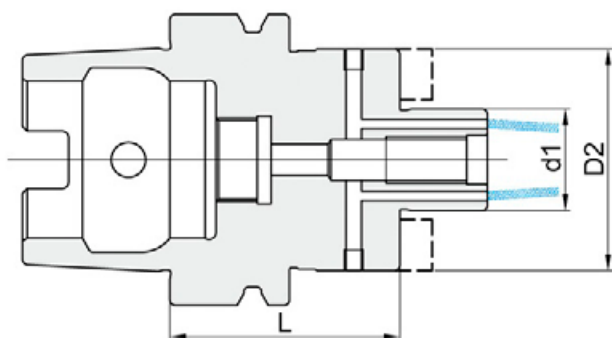
codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	L1	-
HSK 040 (A+C) form						
HKA.040.FS016.050	16	50	32			
HKA.040.FS022.060	22	60	48			
HSK 050 (A+C) form						
HKA.050.FS016.050	16	50	32			
HKA.050.FS022.060	22	60	48			
HSK 063 (A+C) form						
HKA.063.FSW16.050 - D2=38	16	50	38			
HKA.063.FSW22.050 - D2=48	22	50	48			
HKA.063.FSW27.055 - D2=58	27	55	58			
HKA.063.FSW32.060 - D2=75	32	60	75			
HKA.063.FSW32.060 - D2=78	32	60	78			
HKA.063.FSW40.060 - D2=87	40	60	87			
FS: senza canali di lubrificazione - without coolant bores						
HKA.063.FSW16.100 - D2=38	16	100	38			
HKA.063.FSW22.100 - D2=48	22	100	48			
HKA.063.FSW27.100 - D2=58	27	100	58			
HKA.063.FSW32.100 - D2=78	32	100	78			
FS: senza canali di lubrificazione - without coolant bores						
HKA.063.FSW22.160 - D2=48	22	160	48			
HKA.063.FSW27.160 - D2=58	27	160	58			
HKA.063.FSW32.160 - D2=78	32	160	78			
FS: senza canali di lubrificazione - without coolant bores						
HKA.063.FS027.055.	27	55	58			
HKA.063.FS032.060.	32	60	75			



FS: senza canali di lubrificazione - without coolant bores



codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	L1	-
HSK 100 (A+C) form						
HKA.100.FSW16.060 - D2=32	16	60	32	84,5		
HKA.100.FSW16.060 - D2=38	16	60	38	84,5		
HKA.100.FSW22.060 - D2=48	22	60	48	84,5		
HKA.100.FSW27.065 - D2=58	27	65	58	84,5		
HKA.100.FSW32.065 - D2=78	32	65	78	84,5		
HKA.100.FSW40.065 - D2=83	40	65	83			
HKA.100.FSW40.065 - D2=87	40	65	87			
HKA.100.FSW16.100 - D2=38	16	100	38	84,5		
HKA.100.FSW22.100 - D2=48	22	100	48	84,5		
HKA.100.FSW27.100 - D2=58	27	100	58	84,5		
HKA.100.FSW32.100 - D2=78	32	100	78	84,5		
HKA.100.FSW40.100 - D2=87	40	100	87			
HKA.100.FSW16.160 - D2=38	16	160	38	84,5		
HKA.100.FSW22.160 - D2=48	22	160	48	84,5		
HKA.100.FSW27.160 - D2=58	27	160	58	84,5		
HKA.100.FSW32.160 - D2=78	32	160	78	84,5		
HKA.100.FSW40.160 - D2=87	40	160	87			
HKA.100.FS022.060.	22	60	48	84,5		

FS: senza canali di lubrificazione - without coolant bores



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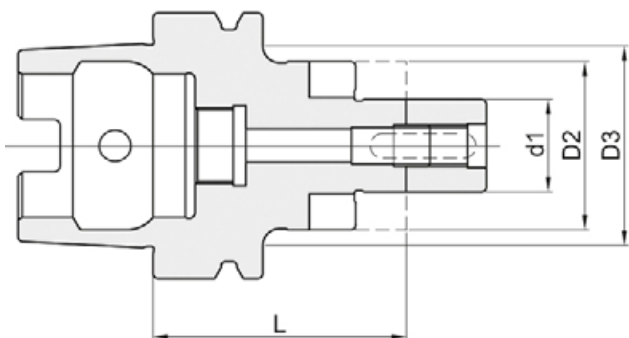


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codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 063 (A+C) form						
HKA.063.FC016.060	16	60	32	39		
HKA.063.FC022.060	22	60	40	47		
HKA.063.FC027.060	27	60	48			
HKA.063.FC032.060	32	60	58			
HKA.063.FC040.070	40	70	70			
HSK 100 (A+C) form						
HKA.100.FC016.060	16	60	32			
HKA.100.FC022.060	22	60	40			
HKA.100.FC027.060	27	60	48			
HKA.100.FC032.070	32	70	58			
HKA.100.FC040.070	40	70	70			



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RTD 6366

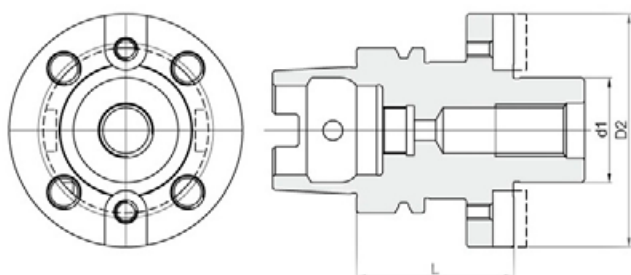


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RLU 6604



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codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	-	-	-
HSK 063 (A+C) form						
HKA.063.FF040.060	40	60	89			
HSK 100 (A+C) form						
HKA.100.FF040.070	40	70	89			
HKA.100.FF040.120	40	120	89			
HKA.100.FF060.080	60	80	128			



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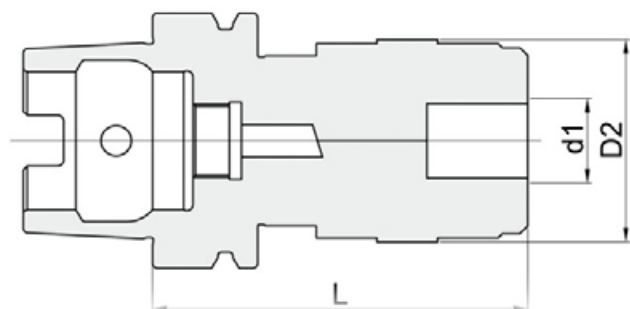


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RRS FM



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codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 063 (A+C) form						
HKA.063.MC019.072	19 M3÷14	72	41		INTEGRALE	
HKA.063.MC019.141	19 M3÷14	141	38	42	KOMBI	
HSK 100 (A+C) form						
HKA.063.MC031.110	31 M4÷24	110	60		INTEGRALE	
HKA.063.MC031.153	31 M4÷24	153	55	48	KOMBI	
HKA.100.MC019.080	19 M3÷14	80	41		INTEGRALE	
HKA.100.MC019.181	19 M3÷14	181	38	42	KOMBI	
HKA.100.MC031.100	31 M4÷24	100	60		INTEGRALE	
HKA.100.MC031.193	31 M4÷24	193	55	48	KOMBI	
HKA.100.MC048.144	48 M14÷36	144	86		INTEGRALE	
HKA.100.MC048.219	48 M14÷36	219	79	72	KOMBI	



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ABM R

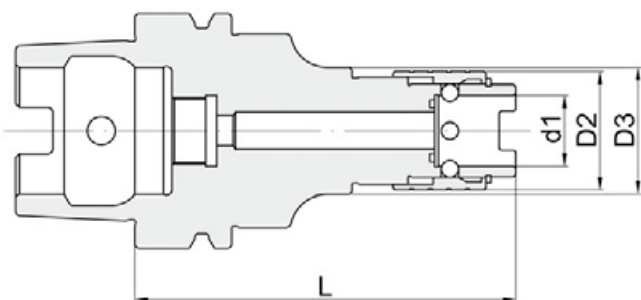


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ABM F



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codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 063 (A+C) form						
HKA.063.MR019.090	19 M3÷14	90	35		INTEGRALE	
HKA.063.MR019.140	19 M3÷14	140	35	42	INTEGRALE	
HKA.063.MR031.100	31 M4÷24	100	50		INTEGRALE	
HSK 100 (A+C) form						
HKA.100.MR019.100	19 M3÷14	100	35		INTEGRALE	
HKA.100.MR019.160	19 M3÷14	160	35		INTEGRALE	
HKA.100.MR031.110	31 M4÷24	110	50		INTEGRALE	
HKA.100.MR031.160	31 M4÷24	160	50		INTEGRALE	
HKA.100.MR048.125	48 M14÷36	125	72		INTEGRALE	



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ATR



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ABM R

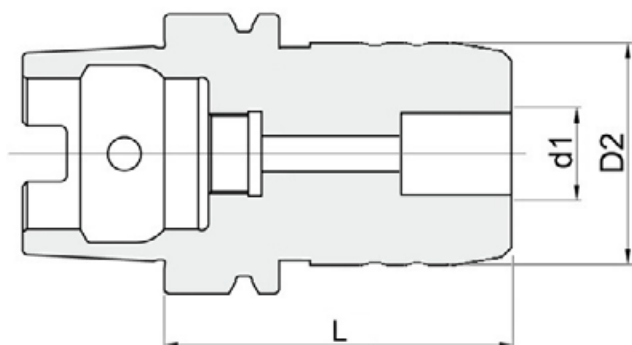


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ABM F



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codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 063 (A+C) form						
HKA.063.MS020.064	20	64	43		ABM.ER16	M3÷12
HKA.063.MS032.097	32	97	60		ABM.ER25	M6÷20
HSK 100 (A+C) form						
HKA.100.MS020.070	20	70	43		ABM.ER16	M3÷12
HKA.100.MS032.091	32	91	60		ABM.ER25	M6÷20



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ABM ER



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Sulle macchine con maschiatura rigida sincronizzata la compensazione assiale, anche se minima, è fondamentale per l'esecuzione di filetti in tolleranza, questa compensazione permette infatti di eliminare eventuali errori della macchina dovuti a difetti o giochi che inevitabilmente si vengono a creare.

Esiste una correlazione tra la durata del maschio per lavorazioni meccaniche e l'allineamento maschio-foro particolarmente evidente su maschi da M3 a M12.

Se il fissaggio del maschio nel maschiatore è tale da non garantire in punta al maschio un perfetto allineamento ed una perfetta assenza di gioco assiale, nell'esecuzione del filetto il maschio avrà un'usura rapida nelle prime spire dell'elica dovuta alle micro collisioni generate dallo scorretto imbocco con il foro da filettare.

Al contrario se il maschio è perfettamente allineato al foro ed anche perfettamente esente da giochi, quando inizia a filettare, la durata del maschio aumenta in modo evidente, fino a tre volte la durata solita.

Caratteristiche tecniche:

- Capacità di maschiatura: M3 - M12; M6 - M20; M14 - M33
- Perfetto allineamento maschio - foro
- Durata del maschio tripla rispetto ad un sistema di maschiatura tradizionale
- Cambio rapido del maschio e della bussola
- Adatto per maschiatura rigida sincronizzata con compensazione in sfilamento (1 mm) ed in rientro (0,2 mm) per serie **M3 - M12 e M6 - M20** e con compensazione in sfilamento (2 mm) ed in rientro (0,4 mm) per serie **M14 - M33**
- Predisposto per il passaggio della lubrificazione fino a 50 bar
- Ingombro ridotto

La filettatura rigida sincronizzata presuppone una macchina atta a sincronizzare la rotazione del mandrino principale ed il movimento di avanzamento. Oggi questa è generalmente una caratteristica standard dei centri di lavoro.

L'esperienza ha dimostrato che al momento dell'inversione di rotazione la sincronia non è sempre garantita al 100%. In tal caso si producono in parte sull'utensile forze assiali molto elevate.

I maschi per filettatura sincrona possono essere alloggiati sia nei comuni mandrini Weldon che nei portautensili a pinze. Entrambi gli elementi di serraggio presentano lo svantaggio, che le forze assiali prodotte non possono essere compensate nell'inversione.

On rigid tapping we need a minimum compensation to absorb eventual errors between feed rate and pitch of the thread. Analysis showed that there is a correlation between the alignment of the tap and hole especially on small taps from M3 to M12.

If the alignment isn't perfect than the tap wears out easily because the tap touches the flanks of the hole because of a slight radial play. On the other hand we found that if there is no radial play involved the tool life can be increased drastically.

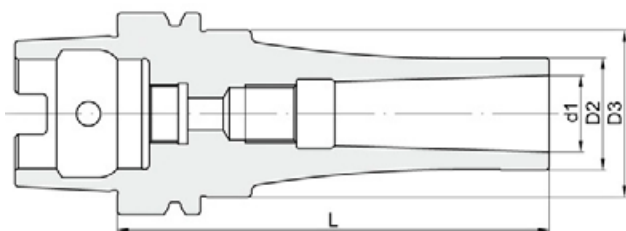
Technical features:

- Tap capacity: M3 - M12; M6 - M20; M14 - M33;
- Perfect line up tap-hole
- Triple life of tap in comparison to a traditional tapping system
- Quick change of the tap and the adapter
- Suitable for rigid tapping with a micro compensation in extension (1 mm) and (0,2 mm) in compression type **M3 - M12 and M6 - M20** and compensation in extension (2 mm) and (0,4 mm) in compression type **M14 - M33**
- Possible coolant flow till 50 bar
- Reduced dimensions.

With rigid tapping we need a machining centre with a rigid tapping program. This has become a standard feature nowadays.

Our experience showed us at the very critical moment of inverting the sense of the machine the synchronisation is not always 100% granted. In that case there is a high pressure on the flanks of the tap.

Taps for synchronized tapping can be placed in Weldon tapping chucks or in collect chucks. In both cases axial forces can not be compensated during the inversion.



codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 063 (A+C) form						
HKA.063.RF001.105	MORSE 1	105	20	52		
HKA.063.RF002.125	MORSE 2	125	28	52		
HKA.063.RF003.145	MORSE 3	145	40	52		
HKA.063.RF004.165	MORSE 4	165	44	52		
HSK 100 (A+C) form						
HKA.100.RF002.140	MORSE 2	140	28	84.5		
HKA.100.RF003.150	MORSE 3	150	40	84.5		
HKA.100.RF004.170	MORSE 4	170	44	84.5		



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ACH RF



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RBH RF

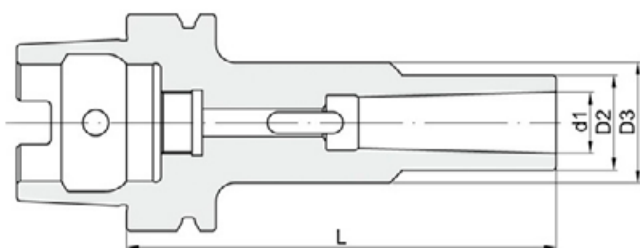


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RVH RF



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codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 063 (A+C) form						
HKA.063.RP001.105	MORSE 1	105	25	35		
HKA.063.RP002.125	MORSE 2	125	28	35		
HKA.063.RP003.145	MORSE 3	145	40	52		
HKA.063.RP004.165	MORSE 4	164	44	52		
HSK 100 (A+C) form						
HKA.100.RP002.125	MORSE 2	125	28	35		
HKA.100.RP003.145	MORSE 3	145	40	52		
HKA.100.RP004.165	MORSE 4	165	44	52		
HKA.100.RP005.220	MORSE 5	220	63	72		



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ATR



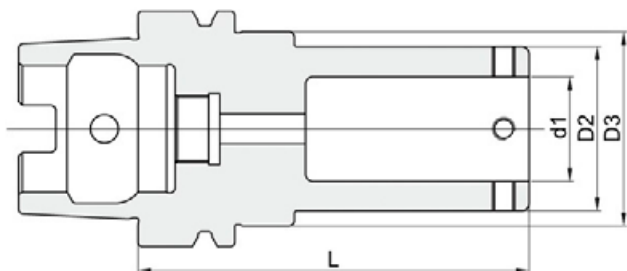
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codice - code

dati tecnici - technical data

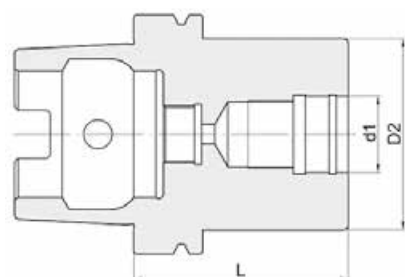
	Ø d1	L	Ø D2	Ø D3	-	-
HSK 100 (A+C) form						
HKA.100.DP063.110	32	110	63	84.5		
HKA.100.DP080.135	40	135	78	84.5		



codice - code

dati tecnici - technical data

	Ø d1	L	Ø D2	Ø D3	-	-
HSK 100 (A+C) form						
HKA.100.VAR50.080	27	80	50			
HKA.100.VAR63.090	32	90	63			
HKA.100.VAR80.090	32	90	80			



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RBF VAR



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RVS VAR



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RTR VAR



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